

## **REMARKS**

Applicant requests favorable reconsideration and allowance of this application in view of the foregoing amendments and the following remarks.

Claims 1 and 3-16 are pending in this application, with Claims 1, 6, 7, 9-11 and 13-15 being independent.

Claim 2 has been cancelled without prejudice. Claims 1, 6, 7, 9-11 and 13-15 have been amended. Applicant submits that support for the amendments can be found in the original disclosure, and therefore no new matter has been added.

Claims 13-16 were provisionally rejected on the ground of non-statutory obviousness-type double patenting based on Claims 13-16 of co-pending application no. 10/686,579. Applicant respectfully traverses this provisional rejection. As recited in independent Claim 13 of the present application, for example, a plurality of partial encoded data that constitute the encoded data of a tile are arranged in descending order based on resolution or quality so that the partial encoded data with the lowest resolution or lowest quality is arranged at the terminal of a hierarchical structure. Applicant submits that the claims of application no. 10/686,579 do not recite or suggest such a division of encoded tile data into partial encoded data and ordering of the partial encoded data based on resolution or quality, and Applicant further submits that such a feature would not have been obvious in view of Claims 13-16 of the '579 application. Claims 14-16 of the present application include similar features and are also not obvious over the claims of the '579 application.

Claims 7, 8, 11, 12, 15 and 16 were rejected under 35 USC § 101 because the claimed invention is directed to non-statutory subject matter. While not conceding the propriety of this rejection, Applicant has amended Claims 7, 11, and 15 to recite that a computer program is embodied in a computer-readable medium. Applicant submits that this subject matter is statutory, and withdrawal of the rejection is requested.

Claims 9-16 were rejected under 35 USC § 103(a) as being unpatentable over Asano et al. (US 2002/0085722), in view of Imao et al. (US 4,994,023), in further view of Weiss (US4,754,482). Claims 1-8 were rejected under 35 USC § 103(a) as being unpatentable over Asano et al. in view of Imao et al., in further view of JPEG 2000 Part 1 Final Committee Draft

Version 1.0 (JPEG2000), and in further view of Weiss. Applicant respectfully traverses these rejections for the reasons discussed below.

As recited in independent Claim 1, the present invention includes, *inter alia*, the features of dividing encoded data of a tile at a terminal of a hierarchical structure into a plurality of partial encoded data regarding resolution or quality, and arranging the partial encoded data in descending order based on the resolution or quality so that partial encoded data of lowest resolution or quality is arranged at the terminal of the hierarchical structure, thereby defining a tree that has as nodes the respective tile groups, the respective tiles, and the respective partial encoded data. Processing is executed to generate encryption key information for a node of interest on the basis of encryption key information generated for a node located at an upper layer and a one-way function. When a desired node is designated among the partial encoded data, the designated partial encoded data and partial encoded data at a higher layer than the designated partial encoded data are set as an object to be encrypted, and encryption is performed for the partial encoded data set as an object to be encrypted using the generated encryption key information corresponding to each node.

In this manner, since the encryption key information for each node is generated using a one-way function and encryption key information of a higher node, the whole encoded image data is managed based on one key (the key for the uppermost node, from which the key information for lower nodes is derived using one-way functions). Moreover, since the partial encoded data for nodes lower than a selected partial encoded data is not set as an object to be encrypted, a user who does not have a decryption key can see an image having a resolution or quality lower than the resolution or quality of the designated node, but cannot see an image of a higher resolution or quality.

Applicant submits that the cited art fails to disclose or suggest at least the above-mentioned features of Claim 1. Asano et al. discloses encrypting an image using key information, but says nothing about encrypting each tile of an image using a respective key. Although the Examiner refers to paragraph 0203 of that reference, that paragraph merely discloses generation of a key for a second layer based on a key for the bottom layer. Thus, in contrast to the present invention of Claim 1, in which key information for a node is generated based on a one-way function and key information of an upper layer, Asano et al. discloses the

opposite (i.e., generating keys from bottom to top rather than from top to bottom of a hierarchical structure).

Imao et al. merely discloses division of image data, but that reference says nothing about forming a hierarchical structure in the claimed manner, and it certainly says nothing about dividing encoded data for a tile into partial encoded data and arranging the partial encoded data in descending order based on the resolution or quality so that the partial encoded data of lowest resolution or lowest quality is arranged at the terminal of a hierarchical structure. The other cited art also is not understood to disclose or suggest at least these features.

Accordingly, Applicant submits that the present invention recited in independent Claim 1 is patentable over the art of record, whether that art is considered individually or in combination. The other independent claims recite features similar to those of Claim 1 discussed above and are believed to be patentable for reasons similar to Claim 1.

The dependent claims are believed to be patentable at least for the same reasons as the independent claims, but also for the additional features they recite.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian L. Klock", is written over a horizontal line.

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